

Infection Highlights 2000-01

Mark H. Wilcox, Editor

**Health Press Limited, Oxford,
UK, 2001 (98 pages)**

This 98-page paperback in the Fast Facts series contains concise updates on a diverse group of topics in infectious diseases. Chapters cover newly recognized and emerging infectious diseases problems including *Escherichia coli* O157:H7, *Helicobacter pylori*, and *Acinetobacter*. Other chapters provide therapeutic updates of a range of problems including exacerbations of chronic obstructive pulmonary disease, HIV infection, and onychomycosis. Most reviews are relevant to the clinician with the exception of discussions on alternative treatments for methicillin-resistant *Staphylococcus aureus* (MRSA) and antibiotic-resistance genes in plants. There are 12 chapters, and most of the authors are recognized authorities in their areas.

Page borders are color-coded by chapter with matching color schemes for tables. Each chapter contains a table of highlights with headings of "What's in," "What's out," and frequently "What's controversial," or "What's needed." This approach works with variable success. It does give a reader whose thumbing through the book a quick look at the major issues. But I can imagine authors struggling with what to include in this format leading to unhelpful entries such as "Over-prescribing of conventional antibiotics" under "What's out" in a chapter on alternative treatments for MRSA. In rapidly changing areas including HIV therapeutics, what was "in" at the time of writing is already "out" or "controversial" by the time of this review in the fall of 2001.

The chapters are, for the most part, well written and factual. The reviews on *Clostridium difficile* diarrhea (authored by the editor) and *E. coli* O157:H7 are especially well done.

Unfortunately, the chapter on HIV chemotherapy contains a few inexplicable errors. Lopinavir, a protease inhibitor, is listed as a nucleoside reverse transcriptase inhibitor in both a table and the text. The authors also states that the nucleotide analogs, such as tenofovir are active in their native form. In fact, they are prodrugs that require phosphorylation by cellular enzymes. The HIV chapter is also the most dated, though I cannot fault the authors for this, given the dynamic nature of the field.

The editor does not tell us the intended audience for the book, but it appears to be geared for the infectious disease specialist rather than the generalist. The reviews average about six small pages of text, and the discussions are not sufficiently complete to serve as a background source for the uninitiated. The editor writes that review articles are often unwieldy or out-of-date at the time of publication. This text aims to summarize new information concisely. Concise it is – but perhaps too much so, as I came away from reading many of the reviews longing for more depth. Nonetheless, this volume generally succeeds with providing "fast facts" in a well-written and easy to read format.

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Remote Sensing and Geographic Information Systems in Epidemiology

**Simon I. Hay,
Sarah E. Randolph,
and David J. Rogers, Editors**

**Academic Press, London, 2000
(357 pages)**

The applications of remote sensing and geographic information systems (GIS) to vector-borne and helminthic diseases have progressed far beyond the pretty pictures which dominated their early use. As Wood et al. indicate in the last chapter, the number of papers in the area has increased drastically over the last decade, in number and sophistication. The editors of this special volume of *Advances in Parasitology* have been in the forefront of applying statistical and biological

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approaches to the mapping of vector-borne diseases and have brought together experts to review existing knowledge, identify gaps in understanding, and describe future applications of these powerful approaches.

This book is a timely overview of satellite imagery, GIS, and spatial statistics. The emphasis is on vector-borne diseases, with one chapter devoted to helminthic diseases. With the exception of the chapter on spatial statistic and GIS, there is little mention of other epidemiologic applications (e.g., GIS and cancer, AIDS, and environmental health). The book is divided into three parts: three introductory chapters describing the methodology; four chapters which review the applications and provide examples from the authors' experiences in studying African trypanosomiasis, malaria, tick-borne diseases, and human helminthic diseases; and three concluding chapters which describe environmental variables, disease risk forecasting, and the education about and future of remote sensing in human health.

Although remote sensing, GIS, and spatial statistics have been reviewed separately elsewhere, the encompassing review, the inclusion of lists of URLs, and the extensive references make the introductory chapters timely and instructive for new users. The audiences that will benefit most from the book include researchers and public health administrators who want to integrate these tools into research, surveillance, and control efforts. This audience, as well as more experienced users, can gain much from the chapters that provide examples of specific applications derived from deep understanding of the biology of disease. The chapters by Rogers, Randolph, and Brooker and Michael, in particular, are based their own research and expertise in trypanosomiasis, tick-borne diseases, and helminthic diseases, respectively.

Remote sensing and GIS are particularly relevant to emerging infectious diseases. The chapter entitled Forecasting Disease Risk for Epidemic Preparedness provides a road map for developing early warning sys-

tems. While this chapter, like the rest of the book, is clearly written by advocates of the applications of remote sensing and GIS, the authors remain aware of critical issues, such as the distinction between statistical and biological models and the notion that insights gained by false negatives and positives predicted by models are as important as successful predictions. Other issues that have hampered more extensive applications of remote sensing and GIS to vector-borne diseases include lack of training, gaps in data (quality and quantity, particularly of epidemiologic and parasitologic data), inadequate tools for data gathering, and limits on management and understanding. This book goes a long way to address these issues and is likely to lead to more and improved applications of remote sensing and GIS.

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